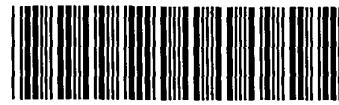


2890
2503

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RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/756,690A

DATE: 05/02/2002 P6
TIME: 16:44:01

Input Set : A:\249-124.app
Output Set: N:\CRF3\05022002\I756690A.raw

4 <110> APPLICANT: KOLTERMAN, ORVILLE G.
5 YOUNG, ANDREW A.
7 <120> TITLE OF INVENTION: USE OF EXENDINS AND AGONISTS THEREOF FOR MODULATION OF
8 TRIGLYCERIDE LEVELS AND TREATMENT OF DYSLIPIDEMIA
10 <130> FILE REFERENCE: 249/124
12 <140> CURRENT APPLICATION NUMBER: 09/756,690A
C--> 13 <141> CURRENT FILING DATE: 2002-04-19
15 <150> PRIOR APPLICATION NUMBER: 60/175,365
16 <151> PRIOR FILING DATE: 2000-01-10
18 <160> NUMBER OF SEQ ID NOS: 188
20 <170> SOFTWARE: PatentIn Ver 2.1
22 <210> SEQ ID NO: 1
23 <211> LENGTH: 39
24 <212> TYPE: PRT
25 <213> ORGANISM: Heloderma horridum
27 <220> FEATURE:
28 <223> OTHER INFORMATION: Exendin-3
30 <220> FEATURE:
31 <223> OTHER INFORMATION: c-term amidation
33 <400> SEQUENCE: 1
34 His Ser Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
35 1 5 10 15
37 Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
38 20 25 30
40 Ser Gly Ala Pro Pro Pro Ser
41 35
44 <210> SEQ ID NO: 2
45 <211> LENGTH: 39
46 <212> TYPE: PRT
47 <213> ORGANISM: Heloderma suspectum
49 <220> FEATURE:
50 <223> OTHER INFORMATION: Exendin-4
52 <220> FEATURE:
53 <223> OTHER INFORMATION: c-term amidation
55 <400> SEQUENCE: 2
56 His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
57 1 5 10 15
59 Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
60 20 25 30
62 Ser Gly Ala Pro Pro Pro Ser
63 35
66 <210> SEQ ID NO: 3
67 <211> LENGTH: 39

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/756,690A

DATE: 05/02/2002

TIME: 16:44:01

Input Set : A:\249-124.app

Output Set: N:\CRF3\05022002\I756690A.raw

68 <212> TYPE: PRT
69 <213> ORGANISM: Artificial Sequence
71 <220> FEATURE:
72 <223> OTHER INFORMATION: Description of Artificial Sequence: Exendin Agonist
74 <220> FEATURE:
75 <221> NAME/KEY: MOD_RES
76 <222> LOCATION: (1)
77 <223> OTHER INFORMATION: His, Arg or Tyr
79 <220> FEATURE:
80 <221> NAME/KEY: MOD_RES
81 <222> LOCATION: (2)
82 <223> OTHER INFORMATION: Ser, Gly, Ala or Thr
84 <220> FEATURE:
85 <221> NAME/KEY: MOD_RES
86 <222> LOCATION: (3)
87 <223> OTHER INFORMATION: Asp or Glu
89 <220> FEATURE:
90 <221> NAME/KEY: MOD_RES
91 <222> LOCATION: (6)
92 <223> OTHER INFORMATION: Phe, Tyr or naphthylalanine
94 <220> FEATURE:
95 <221> NAME/KEY: MOD_RES
96 <222> LOCATION: (7)
97 <223> OTHER INFORMATION: Thr or Ser
99 <220> FEATURE:
100 <221> NAME/KEY: MOD_RES
101 <222> LOCATION: (8)
102 <223> OTHER INFORMATION: Ser or Thr
104 <220> FEATURE:
105 <221> NAME/KEY: MOD_RES
106 <222> LOCATION: (9)
107 <223> OTHER INFORMATION: Asp or Glu
109 <220> FEATURE:
110 <221> NAME/KEY: MOD_RES
111 <222> LOCATION: (10)
112 <223> OTHER INFORMATION: Leu, Ile, Val, pentylglycine or Met
114 <220> FEATURE:
115 <221> NAME/KEY: MOD_RES
116 <222> LOCATION: (14)
117 <223> OTHER INFORMATION: Leu, Ile, pentylglycine, Val or Met
119 <220> FEATURE:
120 <221> NAME/KEY: MOD_RES
121 <222> LOCATION: (22)
122 <223> OTHER INFORMATION: Phe, Tyr or naphthylalanine
124 <220> FEATURE:
125 <221> NAME/KEY: MOD_RES
126 <222> LOCATION: (23)
127 <223> OTHER INFORMATION: Ile, Val, Leu, pentylglycine, tert-butylglycine or Met
129 <220> FEATURE:

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/756,690A

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TIME: 16:44:01

Input Set : A:\249-124.app

Output Set: N:\CRF3\05022002\I756690A.raw

130 <221> NAME/KEY: MOD_RES
 131 <222> LOCATION: (24)
 132 <223> OTHER INFORMATION: Glu or Asp
 134 <220> FEATURE:
 135 <221> NAME/KEY: MOD_RES
 136 <222> LOCATION: (25)
 137 <223> OTHER INFORMATION: Trp, Phe, Tyr, or naphthylalanine
 139 <220> FEATURE:
 140 <221> NAME/KEY: MOD_RES
 141 <222> LOCATION: (31)
 142 <223> OTHER INFORMATION: Pro, homoproline, 3Hyp, 4Hyp, thioproline,
 143 N-alkylglycine, N-alkylpentylglycine, or N-alkylalanine
 145 <220> FEATURE:
 146 <221> NAME/KEY: MOD_RES
 147 <222> LOCATION: (36)
 148 <223> OTHER INFORMATION: Pro, homoproline, 3Hyp, 4Hyp, thioproline,
 149 N-alkylglycine, N-alkylpentylglycine, or N-alkylalanine
 151 <220> FEATURE:
 152 <221> NAME/KEY: MOD_RES
 153 <222> LOCATION: (37)
 154 <223> OTHER INFORMATION: Pro, homoproline, 3Hyp, 4Hyp, thioproline,
 155 N-alkylglycine, N-alkylpentylglycine, or N-alkylalanine
 157 <220> FEATURE:
 158 <221> NAME/KEY: MOD_RES
 159 <222> LOCATION: (38)
 160 <223> OTHER INFORMATION: Pro, homoproline, 3Hyp, 4Hyp, thioproline,
 161 N-alkylglycine, N-alkylpentylglycine, or N-alkylalanine
 163 <220> FEATURE:
 164 <221> NAME/KEY: MOD_RES
 165 <222> LOCATION: (39)
 166 <223> OTHER INFORMATION: Ser, Thr or Tyr, which is optionally amidated with the
 167 provision that the compound is not exendin-3 or exendin-4
 169 <400> SEQUENCE: 3
 W--> 170 Xaa Xaa Xaa Gly Thr Xaa Xaa Xaa Xaa Ser Lys Gln Xaa Glu Glu
 171 1 5 10 15
 W--> 173 Glu Ala Val Arg Leu Xaa Xaa Xaa Xaa Leu Lys Asn Gly Gly Xaa Ser
 174 20 25 30
 W--> 176 Ser Gly Ala Xaa Xaa Xaa Xaa
 177 35
 180 <210> SEQ ID NO: 4
 181 <211> LENGTH: 38
 182 <212> TYPE: PRT
 183 <213> ORGANISM: Artificial Sequence
 185 <220> FEATURE:
 186 <223> OTHER INFORMATION: Description of Artificial Sequence: Exendin Agonist
 188 <220> FEATURE:
 189 <221> NAME/KEY: MOD_RES
 190 <222> LOCATION: (1)
 191 <223> OTHER INFORMATION: His, Arg or Tyr

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/756,690A

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Input Set : A:\249-124.app
Output Set: N:\CRF3\05022002\I756690A.raw

193 <220> FEATURE:
194 <221> NAME/KEY: MOD_RES
195 <222> LOCATION: (2)
196 <223> OTHER INFORMATION: Ser, Gly, Ala or Thr
198 <220> FEATURE:
199 <221> NAME/KEY: MOD_RES
200 <222> LOCATION: (3)
201 <223> OTHER INFORMATION: Asp or Glu
203 <220> FEATURE:
204 <221> NAME/KEY: MOD_RES
205 <222> LOCATION: (5)
206 <223> OTHER INFORMATION: Ala or Thr
208 <220> FEATURE:
209 <221> NAME/KEY: MOD_RES
210 <222> LOCATION: (6)
211 <223> OTHER INFORMATION: Ala, Phe, Tyr or naphthylalanine
213 <220> FEATURE:
214 <221> NAME/KEY: MOD_RES
215 <222> LOCATION: (7)
216 <223> OTHER INFORMATION: Thr or Ser
218 <220> FEATURE:
219 <221> NAME/KEY: MOD_RES
220 <222> LOCATION: (8)
221 <223> OTHER INFORMATION: Ala, Ser or Thr
223 <220> FEATURE:
224 <221> NAME/KEY: MOD_RES
225 <222> LOCATION: (9)
226 <223> OTHER INFORMATION: Asp or Glu
228 <220> FEATURE:
229 <221> NAME/KEY: MOD_RES
230 <222> LOCATION: (10)
231 <223> OTHER INFORMATION: Ala, Leu, Ile, Val, pentylglycine or Met
233 <220> FEATURE:
234 <221> NAME/KEY: MOD_RES
235 <222> LOCATION: (11)
236 <223> OTHER INFORMATION: Ala or Ser
238 <220> FEATURE:
239 <221> NAME/KEY: MOD_RES
240 <222> LOCATION: (12)
241 <223> OTHER INFORMATION: Ala or Lys
243 <220> FEATURE:
244 <221> NAME/KEY: MOD_RES
245 <222> LOCATION: (13)
246 <223> OTHER INFORMATION: Ala or Gln
248 <220> FEATURE:
249 <221> NAME/KEY: MOD_RES
250 <222> LOCATION: (14)
251 <223> OTHER INFORMATION: Ala, Leu, Ile, pentylglycine, Val or Met
253 <220> FEATURE:

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/756,690A

DATE: 05/02/2002

TIME: 16:44:01

Input Set : A:\249-124.app

Output Set: N:\CRF3\05022002\I756690A.raw

254 <221> NAME/KEY: MOD_RES
255 <222> LOCATION: (15)
256 <223> OTHER INFORMATION: Ala or Glu
258 <220> FEATURE:
259 <221> NAME/KEY: MOD_RES
260 <222> LOCATION: (16)
261 <223> OTHER INFORMATION: Ala or Glu
263 <220> FEATURE:
264 <221> NAME/KEY: MOD_RES
265 <222> LOCATION: (17)
266 <223> OTHER INFORMATION: Ala or Glu
268 <220> FEATURE:
269 <221> NAME/KEY: MOD_RES
270 <222> LOCATION: (19)
271 <223> OTHER INFORMATION: Ala or Val
273 <220> FEATURE:
274 <221> NAME/KEY: MOD_RES
275 <222> LOCATION: (20)
276 <223> OTHER INFORMATION: Ala or Arg
278 <220> FEATURE:
279 <221> NAME/KEY: MOD_RES
280 <222> LOCATION: (21)
281 <223> OTHER INFORMATION: Ala or Leu
283 <220> FEATURE:
284 <221> NAME/KEY: MOD_RES
285 <222> LOCATION: (22)
286 <223> OTHER INFORMATION: Ala, Phe, Tyr or naphthylalanine
288 <220> FEATURE:
289 <221> NAME/KEY: MOD_RES
290 <222> LOCATION: (23)
291 <223> OTHER INFORMATION: Ile, Val, Leu, pentylglycine, tert-butylglycine or Met
293 <220> FEATURE:
294 <221> NAME/KEY: MOD_RES
295 <222> LOCATION: (24)
296 <223> OTHER INFORMATION: Ala, Glu or Asp
298 <220> FEATURE:
299 <221> NAME/KEY: MOD_RES
300 <222> LOCATION: (25)
301 <223> OTHER INFORMATION: Ala, Trp, Phe, Tyr or naphthylalanine
303 <220> FEATURE:
304 <221> NAME/KEY: MOD_RES
305 <222> LOCATION: (26)
306 <223> OTHER INFORMATION: Ala or Leu
308 <220> FEATURE:
309 <221> NAME/KEY: MOD_RES
310 <222> LOCATION: (27)
311 <223> OTHER INFORMATION: Ala or Lys
313 <220> FEATURE:
314 <221> NAME/KEY: MOD_RES

RAW SEQUENCE LISTING ERROR SUMMARY DATE: 05/02/2002
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Input Set : A:\249-124.app
Output Set: N:\CRF3\05022002\I756690A.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#: 3; Xaa Pos. 1,2,3,6,7,8,9,10,14,22,23,24,25,31,36,37,38,39
Seq#: 4; Xaa Pos. 1,2,3,5,6,7,8,9,10,11,12,13,14,15,16,17,19,20,21,22,23,24
Seq#: 4; Xaa Pos. 25,26,27,28,31,36,37,38
Seq#: 5; Xaa Pos. 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,19,20,21,22,23
Seq#: 5; Xaa Pos. 24,25,26,27,28,31,36,37,38
Seq#: 15; Xaa Pos. 6
Seq#: 20; Xaa Pos. 10
Seq#: 21; Xaa Pos. 10
Seq#: 22; Xaa Pos. 14
Seq#: 23; Xaa Pos. 14
Seq#: 24; Xaa Pos. 22
Seq#: 27; Xaa Pos. 23
Seq#: 28; Xaa Pos. 23
Seq#: 31; Xaa Pos. 31,36,37,38
Seq#: 32; Xaa Pos. 36,37,38
Seq#: 33; Xaa Pos. 31,36,37,38
Seq#: 34; Xaa Pos. 36,37,38
Seq#: 35; Xaa Pos. 31,36,37,38
Seq#: 36; Xaa Pos. 31,36,37,38
Seq#: 37; Xaa Pos. 31,36,37,38
Seq#: 38; Xaa Pos. 36,37,38
Seq#: 39; Xaa Pos. 31,36,37,38
Seq#: 81; Xaa Pos. 31,36,37,38
Seq#: 82; Xaa Pos. 36,37,38
Seq#: 83; Xaa Pos. 31
Seq#: 84; Xaa Pos. 31,36,37
Seq#: 85; Xaa Pos. 31,36,37
Seq#: 86; Xaa Pos. 31,36
Seq#: 89; Xaa Pos. 6
Seq#: 93; Xaa Pos. 10
Seq#: 94; Xaa Pos. 22
Seq#: 95; Xaa Pos. 23
Seq#: 99; Xaa Pos. 31,36,37
Seq#: 115; Xaa Pos. 6
Seq#: 116; Xaa Pos. 6
Seq#: 127; Xaa Pos. 10
Seq#: 128; Xaa Pos. 10
Seq#: 137; Xaa Pos. 14
Seq#: 138; Xaa Pos. 14
Seq#: 151; Xaa Pos. 22
Seq#: 152; Xaa Pos. 22
Seq#: 155; Xaa Pos. 23
Seq#: 156; Xaa Pos. 23
Seq#: 181; Xaa Pos. 31,36,37,38

RAW SEQUENCE LISTING ERROR SUMMARY DATE: 05/02/2002
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Input Set : A:\249-124.app
Output Set: N:\CRF3\05022002\I756690A.raw

Seq#:182; Xaa Pos. 36,37,38
Seq#:183; Xaa Pos. 31,36,37
Seq#:184; Xaa Pos. 31,36

VERIFICATION SUMMARY
PATENT APPLICATION: US/09/756,690A

DATE: 05/02/2002
 TIME: 16:44:02

Input Set : A:\249-124.app
 Output Set: N:\CRF3\05022002\I756690A.raw

L:13 M:271 C: Current Filing Date differs, Replaced Current Filing Date
 L:170 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:0
 L:173 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:16
 L:176 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:32
 L:345 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:0
 L:348 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:16
 L:351 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:32
 L:530 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:0
 L:533 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:16
 L:536 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:32
 L:742 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15 after pos.:0
 L:857 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20 after pos.:0
 L:884 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:21 after pos.:0
 L:911 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:22 after pos.:0
 L:938 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:23 after pos.:0
 L:968 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:24 after pos.:16
 L:1039 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:27 after pos.:16
 L:1066 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:28 after pos.:16
 L:1152 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:31 after pos.:16
 L:1155 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:31 after pos.:32
 L:1192 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:32 after pos.:32
 L:1231 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:33 after pos.:16
 L:1234 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:33 after pos.:32
 L:1271 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:34 after pos.:32
 L:1310 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:35 after pos.:16
 L:1313 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:35 after pos.:32
 L:1352 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:36 after pos.:16
 L:1355 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:36 after pos.:32
 L:1394 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:37 after pos.:16
 L:1397 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:37 after pos.:32
 L:1434 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:38 after pos.:32
 L:1473 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:39 after pos.:16
 L:1476 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:39 after pos.:32
 L:2325 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:81 after pos.:16
 L:2328 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:81 after pos.:32
 L:2365 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:82 after pos.:32
 L:2389 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:83 after pos.:16
 L:2426 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:84 after pos.:16
 L:2429 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:84 after pos.:32
 L:2463 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:85 after pos.:16
 L:2466 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:85 after pos.:32
 L:2495 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:86 after pos.:16
 L:2498 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:86 after pos.:32
 L:2560 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:89 after pos.:0
 L:2641 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:93 after pos.:0
 L:2668 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:94 after pos.:16
 L:2692 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:95 after pos.:16
 L:2785 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:99 after pos.:16

VERIFICATION SUMMARY DATE: 05/02/2002
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Input Set : A:\249-124.app
Output Set: N:\CRF3\05022002\I756690A.raw

L:2788 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:99 after pos.:32
L:3093 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:115 after pos.:0
L:3117 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:116 after pos.:0